

**Notice of Allowability**

Application No.

10/797,261

Examiner

Thomas D. Alunkal

Applicant(s)

REES ET AL.

Art Unit

2627

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 7/18/07.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/18/07 has been entered.

***Examiner's Amendment***

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Kurin on 8/16/07.

The application has been amended as follows:

**In the Claims:**

a. In claim 11, change "wherein the APC and the ROPC and both included in the LDIC" to "wherein the APC and the ROPC **are** both included in the LDIC".

b. In claim 11, change “a running optical power controller (ROPC);” to “a running optical power controller (ROPC); **and**”.

Comments:

The amendment to claim 11 has been made due to a grammatical error and misplacement of a word in the submitted claims.

***Response to Arguments***

Applicant's arguments, filed 7/18/07, with respect to claims 1-11 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of claims 1-11 have been withdrawn.

***Allowable Subject Matter***

Claims 1-11 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims 1, 4, and 11, in such a manner that a rejection under 35. U.S.C 102 or 103 would be proper.

Regarding claim 1, the prior art taken either singularly or in combination fails to disclose a laser driver integrated circuit (LDIC), the LDIC including: an automatic power controller (APC), a running optical power controller (ROPC), and a write strategy generator (WSG), ***wherein said APC, said ROPC and said WSG are all included in***

**the LDIC; wherein the LDIC is configured to be located on an optical pickup unit (OPU) and to drive a laser diode that is located on the OPU with the LDIC**, wherein said APC is configured to control an output of the laser diode to compensate for changes in characteristics of the laser diode, wherein said ROPC is configured to control the output of the laser diode to compensate for variations in an optical media; wherein said WSG is configured to implement write strategies, and wherein said APC and said ROPC each include there own dedicated offset, gain and sample hold circuitry, thereby reducing an amount of analog signals to be sent over a flex cable between the OPU and a main board.

Regarding claim 4, the prior art taken either singularly or in combination fails to disclose a chip-set comprising: a laser driver integrated circuit (LDIC) adapted to drive a laser diode, **said LDIC including: an automatic power controller (APC); and a runner optical power controller (ROPC), and a power monitor integrated circuit (PMIC)** to monitor the laser diode, said PMIC including its own dedicated offset, gain and sample-and-hold circuitry, and a photo-detector integrated circuit (PDIC) to detect light produced by the laser diode after the light has been reflected from an optical media, said PDIC including its own dedicated offset, gain, and sample-and-hold circuitry; **wherein the chip-set is configured to be located on an optical pick-up unit (OPU) that can communicate with components on a main board over a flex cable.**

Regarding claim 11, the prior art taken either singularly or in combination fails to disclose a laser driver integrated circuit (LDIC), the LDIC including: **an automatic**

***power controller (APC), a running optical power controller (ROPC), and wherein the APC and the ROPC and the ROPC are both included in the LDIC, wherein the LDIC is configured to drive a laser diode that is located on an optical pick-up unit (OPU) with the LDIC, wherein said APC is configured to control an output of the laser diode to compensate for changes in characteristics of the laser diode, wherein said ROPC is configured to control the output of the laser diode to compensate for variations in an optical media, and wherein said APC and said ROPC each include there own dedicated offset, gain and sample and hold circuitry, thereby reducing an amount of analog signals to be sent over a flex cable between the OPU and a main board.***

Dependent claims 2-3 and 5-10 are allowed with there respective parent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kelly et al (US PgPub 2002/0114244) disclose a laser driver circuit containing an automatic power controller to control an output of the laser diode to compensate for changes in characteristics of the laser diode (Figure 9A, Element 260 and Paragraph 60), a running optical power controller (ROPC) to control the output of the laser diode to compensate for variations in an optical media (Figure 8, ROPC 1,2,3.

Signals from the EFM-Encoder are transmitted to the APC, which represents both the APC and ROPC of the present invention), a write strategy generator (WSG) to implement write strategies (Figure 8, Element 232) wherein the APC and ROPC include an offset, gain and sample and hold circuitry (Figure 9, Elements 310, 330, 340, and 360) thereby reducing an amount of analog signals to be sent over a flex cable between the OPU and a main board (Figure 9A, Element 120 and Paragraphs 47-48). Shimoda et al. (US 6,442,115) disclose an information recording apparatus with APC and a WSG.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Alunkal/  
Art Unit 2627



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER